

Mineral Industry Surveys

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SILICON IN MARCH 2003

In March 2003, domestic production of silicon ferroalloys plus metal, excluding silvery pig iron, was estimated to have increased by 15% compared with the corresponding figure for the previous month, according to the U.S. Geological Survey. Domestic shipments increased by about 16% compared with those of February 2003. Producer stocks decreased by 2% from those of February 2003. All domestic data for ferrosilicon have been combined to avoid disclosing company proprietary data.

The February 2003 trade data included in this report indicated that the amount of silicon metal imports decreased by 40% compared with those of January 2003, with significant decreases in the trade categories "other silicon," and "99.0% - 99.9% silicon." Ferrosilicon imports, on a gross weight basis, increased by 39% compared with those in the previous month, owing primarily to significant increases in the trade categories "other ferrosilicon, 55% - 80%" and "ferrosilicon, 55% - 80% silicon." On a gross weight basis, ferrosilicon exports decreased by 14% compared with those of January 2003, with significant decreases in both trade categories. Silicon metal exports decreased by 65% compared with those in the previous month, owing to significant decreases in each trade category, especially "other silicon."

Update

In April 2003, GE Silicones acquired Crompton's OSi organosilicones business for \$645-million in cash (Ryan's

Notes, 2003). Crompton will receive GE's Specialty Chemicals business valued at \$160-million and quarterly "earn-out" payments for 3 years after closing based on the combined performance of GE's existing silicones business and the organosilicones business it is acquiring from Crompton.

On May 28, 2003, Dow Corning Corp. and Wacker Chemie announced their intent to form a joint venture to build a new plant to produce silicone intermediates and fumed silica at an undetermined location in Asia (Dow Corning Corp. and Wacker Chemie, 2003¹). The companies will have separate finishing plants at the same site, and continue to compete independently in the global market.

Reference Cited

Ryan's Notes, 2003, GE takes over OSi: Ryan's Notes, v. 10, no. 18, May 5, p. 2.

Internet Reference Cited

Dow Corning Corp. and Wacker Chemie, 2003, Dow Corning and Wacker plan strategic alliance to produce key raw materials in Asia—An exciting alliance between industry leaders, May 28, accessed June 5, 2003, at URL <http://www.dowcorning.com>.

¹A reference that includes a section mark (§) is found in the Internet Reference Cited section.

Prices, cents per pound, silicon content

	<u>50% Ferrosilicon¹</u>	<u>75% Ferrosilicon²</u>	<u>Silicon Metal²</u>
March 6	51.0-56.0	47.0-49.0	60.0-62.0
March 13	51.0-56.0	47.0-49.0	60.0-62.0
March 20	51.0-56.0	48.0-50.0	60.0-62.0
March 26	51.0-56.0	47.0-49.0	60.0-62.0

¹Source: Ryan's Notes, North American transaction price.

²Source: Platts Metals Week, dealer import price.

TABLE 1
U.S. PRODUCTION, SHIPMENTS, AND PRODUCER STOCKS OF SILICON ALLOYS AND METAL IN 2003^{1,2}

(Metric tons)

Material	Gross production ⁴		Net shipments		Stocks, March 31
	March	Year to date ⁵	March	Year to date ⁵	
Ferrosilicon:					
All grades ^{6,7}	22,300	63,900	18,000	50,600	32,200
Silicon metal:					
Excludes semiconductor grades	10,800	29,900	10,300	27,700	4,270

¹Data are rounded to no more than three significant digits.

²Includes U.S. Geological Survey estimates.

³Data for silvery pig iron (less than 25% silicon) withheld to avoid disclosing company proprietary data.

⁴Includes in-plant consumption, as in production of magnesium ferrosilicon and other miscellaneous alloys.

⁵Includes revisions to previous months' data.

⁶Ferrosilicon categories were aggregated to avoid disclosing company proprietary data.

⁷Includes miscellaneous silicon alloys.

TABLE 2
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN FEBRUARY 2003^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Canada	274	164	\$255,000	569	341	\$551,000
Malaysia	5	4	9,120	11	8	18,200
Mexico	48	31	69,900	120	74	166,000
Total	328	199	334,000	700	424	735,000
Other ferrosilicon:						
Brazil	--	--	--	20	9	24,500
Canada	185	93	149,000	447	223	382,000
Italy	16	9	26,300	16	9	26,300
Korea, Republic of	19	10	20,100	131	66	135,000
Mexico	186	93	150,000	274	137	233,000
Total	406	203	345,000	887	443	801,000
Total ferrosilicon	733	403	679,000	1,590	867	1,540,000
Metal:						
More than 99.99% silicon:						
China	76	XX	2,740,000	161	XX	4,730,000
France	7	XX	165,000	13	XX	308,000
Georgia	--	XX	--	14	XX	332,000
Germany	76	XX	2,480,000	135	XX	4,390,000
Japan	138	XX	10,600,000	573	XX	29,400,000
Korea, Republic of	66	XX	2,380,000	90	XX	3,450,000
Norway	154	XX	3,730,000	220	XX	5,440,000
Taiwan	15	XX	591,000	32	XX	1,180,000
Ukraine	--	XX	--	14	XX	410,000
United Kingdom	19	XX	1,360,000	29	XX	2,820,000
Other (24 countries)	23	XX	1,900,000	49	XX	4,250,000
Total	574	574 °	26,000,000	1,330	1,330 °	56,700,000

See footnotes at end of table.

TABLE 2--Continued
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN FEBRUARY 2003^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Metal--Continued:						
99.00% - 99.99% silicon:						
Belgium	--	--	--	4	4	\$5,180
Brazil	18	17	\$34,600	18	17	34,600
Denmark	--	--	--	7	7	9,270
Jamaica	(3)	(3)	3,080	9	9	15,300
Japan	--	--	--	1	1	7,470
Mexico	15	15	24,700	23	22	35,400
Norway	--	--	--	84	83	118,000
Panama	--	--	--	2	2	9,500
Taiwan	--	--	--	3	3	7,870
Venezuela	35	35	51,100	35	35	51,100
Other (Salvador)	(3)	(3)	3,070	(3)	(3)	3,070
Total	68	67	117,000	184	183	297,000
Other silicon:						
Canada	58	56	73,900	1,690	1,640	1,740,000
China	37	36	48,400	37	36	48,400
France	6	5	7,300	6	5	7,300
Indonesia	--	--	--	8	8	12,700
Italy	2	2	14,900	4	4	20,200
Japan	141	137	186,000	235	228	370,000
Mexico	17	17	48,300	20	20	65,700
Netherlands	20	19	163,000	66	63	487,000
Taiwan	2	2	7,040	4	4	14,100
United Kingdom	49	47	47,700	141	137	147,000
Other (4 countries)	3	3	26,700	3	3	37,800
Total	334	324	623,000	2,210	2,140	2,950,000
Total silicon metal	975	965	26,700,000	3,720	3,660	60,000,000

⁶Estimated. XX Not applicable.

¹Presentation of monthly data is based on the year-to-date quantities (gross weight) of the top 10 countries.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN FEBRUARY 2003^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55% - 80% silicon, over 3% Ca:						
Argentina	94	64	\$121,000	126	84	\$170,000
Brazil	120	90	65,400	173	121	125,000
Canada	--	--	--	41	30	16,400
Mexico	2	2	7,390	4	3	14,800
Total	216	156	194,000	344	237	326,000
55% - 80% silicon, Other:						
Brazil	111	83	62,600	3,120	2,350	1,640,000
Canada	1,570	1,190	920,000	2,270	1,720	1,350,000
China	6,440	4,860	3,230,000	6,480	4,890	3,250,000
Egypt	--	--	--	1,150	814	583,000
Kazakhstan	--	--	--	4,250	3,260	2,510,000
Norway	420	313	537,000	828	617	1,070,000
Russia	--	--	--	770	507	390,000
South Africa	--	--	--	1,300	996	703,000
Ukraine	2,560	1,920	1,210,000	2,560	1,920	1,210,000
Venezuela	5,260	3,950	4,880,000	5,570	6,220 ³	6,670,000
Other (2 countries)	206	141	516,000	417	282	957,000
Total	16,600	12,500	11,400,000	28,700	23,600	20,300,000

See footnotes at end of table.

TABLE 3--Continued
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN FEBRUARY 2003^{1,2}

(Metric tons, unless otherwise specified)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Ferrosilicon--Continued:						
Magnesium ferrosilicon:						
Argentina	400	182	\$283,000	440	200	\$314,000
Brazil	411	187	273,000	766	346	523,000
Canada	287	138	243,000	314	150	267,000
China	--	--	--	920	414	620,000
France	20	9	21,900	20	9	21,900
Japan	79	37	91,500	95	43	128,000
Norway	1,160	522	934,000	1,750	796	1,400,000
Total	2,360	1,080	1,850,000	4,310	1,960	3,280,000
Other ferrosilicon:						
Brazil	--	--	--	116	65	76,900
Canada	587	207	378,000	1,310	448	878,000
China	1,160	939	593,000	1,160	939	593,000
Russia	39	18	40,600	39	18	40,600
Total	1,790	1,160	1,010,000	2,630	1,470	1,590,000
Total ferrosilicon	20,900	14,800	14,400,000	36,000	27,200	25,500,000
Metal:						
More than 99.99% silicon:						
Canada	2	XX	4,380	2	XX	4,380
China	35	XX	272,000	35	XX	297,000
Denmark	(4)	XX	130,000	1	XX	225,000
Finland	9	XX	29,100	9	XX	29,100
France	(4)	XX	2,210	(4)	XX	2,210
Germany	22	XX	2,140,000	58	XX	5,780,000
Italy	19	XX	1,010,000	62	XX	2,130,000
Japan	44	XX	1,200,000	93	XX	2,270,000
Korea, Republic of	6	XX	128,000	6	XX	128,000
Spain	2	XX	6,120	2	XX	6,120
Total	139	139 ^e	4,930,000	266	266 ^e	10,900,000
99.00% - 99.99% silicon:						
Argentina	20	20	19,100	120	119	115,000
Australia	1,010	1,000	1,070,000	1,880	1,620 ³	1,970,000
Austria	--	--	--	20	20	19,100
Brazil	5,630	5,590	6,680,000	10,600	10,500	13,000,000
Canada	661	646	788,000	2,210	2,190	2,640,000
China	120	119	107,000	120	119	107,000
Kazakhstan	120	119	154,000	300	297	311,000
Norway	482	479	951,000	1,000	997	1,840,000
South Africa	657	652	705,000	5,670	5,620	6,280,000
Spain	--	--	--	20	(4) ³	19,200
Other (Sweden)	--	--	--	10	10	68,800
Total	8,700	8,630	10,500,000	21,900	21,500	26,400,000
Other silicon:						
Australia	80	59	76,300	160	138	152,000
Brazil	--	--	--	540	532	543,000
Canada	485	476	320,000	864	842	637,000
China	398	392	349,000	1,270	1,250	1,120,000
Korea, Republic of	--	--	--	80	78	54,800
Norway	--	--	--	1,050	1,040	1,060,000
South Africa	780	768	752,000	2,010	1,980	1,930,000
Ukraine	153	150	143,000	272	268	255,000
United Arab Emirates	--	--	--	319	314	264,000
United Kingdom	60	58	61,000	261	251	262,000
Other (7 countries)	128	101	131,000	219	191	233,000
Total	2,080	2,010	1,830,000	7,050	6,880	6,510,000
Total silicon metal	10,900	10,800	17,200,000	29,200	28,600	43,700,000

^eEstimated. XX Not applicable.

¹Presentation of monthly data is based on the year-to-date quantities (gross weight) of the top 10 countries.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³All or part of these data have been referred to the U.S. Census Bureau for verification.

⁴Less than 1/2 unit.

Source: U.S. Census Bureau.